

REMARKS

Applicant responds to this 2nd Non Final Office Action. Applicant's response to the 1st Office action, kept all original claims except for amended claim 22, cancelled claim 44, and new claim 45.

New grounds of rejection are under 35. U.S.C. 101 and 103.

I.

Greenfield, Pat. No. 5,737,227

The Greenfield device is described as a method with a computer implementation.

Greenfield shows a computer system to record system components, conditions, planning, maintenance. It includes "coating standards, for coatings as may be used in the process. Col. 3, lines 60 to 69, col. 4, lines 1-5.

The first Step 100, Facility Breakdown/Asses Groups, is briefly described in Table 1. Col. 4, lines 14 -39. The method requires identification of separate Master Components, by type, whether or not critical, and location. Subcomponents of each Master component are entered; with Subcomponent details are limited to the respective materials and configuration, criticality, date of creation, and to an identification number, under the respective Master Component number.

The second Step 200, Condition Survey, is briefly described in Table 2, col. 4, lines 46 to 64, col. 5, and lines 1-44. The Condition Survey is limited to the Subcomponent level and to Make Work Recommendations, by subcomponent.

The third Step 300, Coating Systems Standards, is a record made by selection of specific coatings and respective standard for use. As described, it is a data base of operator

defined criteria or calculations. As described, it is not made specific to any Master Component or Subcomponent. Col. 5, lines 45 to 67, col. 6, lines 1 to 60.

The fourth Step 400, Work Management, is a record made after review of each Subcomponent's condition and by application of engineering or administrative expertise, experience, and knowledge, altering or accepting the surveyor's recommendations, and schedules work for the respective Subcomponents. Specific Data operations and reports are identified. Col. 7, lines 24 to 30.

The methodology of Steps 100, 200, 300, and 400, is shown in Figs. 2, and 3A to 3H.

Fig. 4, and Col. 9, lines 45 to Col. 12, lines 50, shows a facility with Master Components and Subcomponents. The method of Steps 100, 200, 300, and 400, are shown applied to the facility shown in Fig. 4, presumably using the computer data entry and processing system described in the flow charts of Fig. 3A to 3H and in Col 7, line 32 to Col. 9, line 44.

II.

The Law

A. 35 U.S.C. 101

The law to be applied to determine if a method claim qualifies as statutory subject matter is stated in IN RE BERNARD L. BILSKI and RAND A. WARSAW 545 F.3d 943, 2007-1130 (CAFC 2008), clarifying the standards applicable in determining whether a claimed method constitutes a statutory "process" under 101. At 949.

The Bilski court restated the rule applied by the Supreme Court, for a claimed process, as,

[A] claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a

specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article.

At 955.

B. 35 U.S.C. 102

Grounds for rejection under 35 U.S.C. 102 requires, to anticipate a claim, the reference must teach every element of the claim. See cases cited in Manual of Patent Examining Procedure §2131, for the rule,

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

"When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001)

C. 35 U.S.C. 103(a)

The law with respect to obviousness and the standard of review for examination, is explained in *IN RE SANG-SU LEE* 277 F.3d 1338 (Fed. Cir. 2002) and the leading case law on 35 U.S.C. 103, *KSR INTERNATIONAL CO., PETITIONER v TELEFLEX INC. ET AL.* 527 U.S. 150, 50 USPQ2d 1930 (1999).

The Standard of Review

The standard of review requires that a final action of rejection, on appeal, must be set

aside an action that is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; or unsupported by substantial evidence. **In re Sang Lee**, at, 1342.

The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies .Id.

Obviousness

KSR INTERNATIONAL CO., PETITIONER v TELEFLEX INC. ET AL, is the most recent Supreme Court analysis of the factors defining the inquiry of "obviousness," set out in *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1, 17-18, as an out an objective analysis for applying '103:

"[T]he scope and content of the prior art are . . . determined; differences between the prior art and the claims at issue are . . . ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." While the sequence of these questions might be reordered in any particular case, the factors define the controlling inquiry. At 2.

In applying the Graham test, the Court provided as guiding principles, at 3,

1. A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.
2. When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another.
3. If a person of ordinary skill in the art can implement a predictable variation,

and would see the benefit of doing so, '103 likely bars its patentability.

4. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless it's actual application is beyond the person's skill.

5. A court must ask whether the improvement is more than the predictable use of prior-art elements according to their established functions. Following these principles may be difficult if the claimed subject matter involves more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.

6. To determine whether there was an apparent reason to combine the known elements in the way a patent claims, it will often be necessary to look to interrelated teachings of multiple patents; to the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art.

7. To facilitate review, this analysis should be made explicit. But it need not seek out precise teachings directed to the challenged claim's specific subject matter, for a court can consider the inferences and creative steps a person of ordinary skill in the art would employ.

III.

The Claims

Rejection Under 35 U.S.C. 101

Claim 23, as currently amended, recites,

A data processing system for controlling corrosion, comprising, a) means for data processing including means for data collection for storing data in a data base and means for producing reports from said stored data; b) said means for producing reports includes means for producing summary

recommended work reports summarizing recommended work for controlling corrosion at the enterprise, structural, and element, levels. The recitation of claim 23 is a data processing system recited as steps for performing specific functions. It recites the acts performed by the elements of a data processing system using a data processor, a data base, and the production of reports, recited as “summarizing recommended work for controlling corrosion at the enterprise, structural, and element, levels.”

Claim 1 (Currently Amended), recites,

A data processing system for controlling corrosion, comprising, a) means for data processing including means for data collection for storing data in a data base and means for producing reports from said stored data; b) said means for producing reports includes means for producing summary recommended work reports summarizing recommended work for controlling corrosion at the enterprise, structural, or and element, levels

Rejection under 35 U.S.C. 101

The recitation of claim 23, is a method for controlling corrosion, recited in steps for performing specific functions, under 35 U.S.C. 112, 6th Paragraph, is construed to cover the structure, material, or acts described in the specification, for producing the generated reports and in the structure of the reports.

The recitation of claim 1, is data processing system for controlling corrosion, comprising, a) means for data processing including means for data collection for storing data in a data base and means for producing reports from said stored data; b) said means for producing reports includes means for producing summary recommended work reports summarizing recommended work for controlling corrosion at the enterprise, structural, or and element, levels.

A rejection meeting the rule of Bilski, must demonstrate the deficiency in the structure, material, or acts, and equivalents described in the specification, in transforming the data stored in the data base into the data structures and displayed reports, described in the specification.

Examiner has failed to demonstrate how the “means plus function,” language of claim 1 or the “steps,” language of claim 23, construed to cover the structure, material or acts, described in the specification, “fails to define any structural or functional relationships,” required to meet the Bilski rule. This rejection under 35 U.S. C. 101, should be withdrawn.

Applicant’s specification recites the computer data processing system and computer operated data base, and display, as the means for performing the functions recited in claims 1 to 22 and the steps accomplished in claims 23 to 45.

The identity of the apparatus that comprises the means plus functions and which accomplishes the method steps, is the machinery of a computer data processing system, including all of its machinery, *inter alia*, a processor, store, display, and programming software, comprising the physical entity of optically or magnetically recorded, and machine readable, data for necessary for operating the processors, displays, and reading and writing data into the memories and data bases.

The description of the computer data processing system, described as the machinery for practicing the invention, fit within the definition of process and machine under 35 U.S.C. 101.

Examiner’s comments about “software,” is irrelevant to a data processing system, as described in the specification, employing data structures, whether embodied in embedded data stored in fixed memory or stored on disc, or copied from a disc or other portable medium, to fixed operating memory.

The accepted definition of software is computer programs used to direct the operation of a computer. It may be an ordered or organized collection of optical or magnetic signals, capable of being read and translated into electrical signals used to operate the computer data processing machinery. Examiner is without any basis in fact in the assertion the claim must separately specify the software “statically embodied in a physical medium.”

Examiner has not provided any basis in reason or fact, why the machinery used to operate the data processor and to store and retrieve the data, requires a separate recitation, additional to the data processing system. Examiner has failed to provide any basis in fact or law, to show that one skilled in the art, would not know and understand how to practice the invention, by using in the a computer processing system inclusive of all its elements, of which software is only one. Examiner has failed to provide any basis in reason or fact, why the invention could not be practiced with firmware, meaning physical memory containing the magnetically or optically recorded instructions for operating the computer processor, or as was practiced, up to about the mid 1980's, physically wired logic circuits. As examiner knows, these archaic physically wired logic circuits were replaced with data in the form of electronic signals that operated programmable circuitry.

Examiner requires the claim to recite “interrelationships between the software per se and the other elements of the invention that permit the software's function of be realized, data.” However there is no basis in law or fact for examiner's requirement. As stated, the “software,” as identified by examiner, is integral to the data processing machinery shown by applicant. The interrelationships are well known to those skilled in the art of data processing machinery and examiner has not shown why or how the claims fail the requirements of 36 U.S.C. 112, or how this requirement is related to the rejection under 35 U.S.C. 101.

Examiner must make an election between the rejection under 35 U.S.C. 101 and the rejections under 35 U.S.C. 102 and 103(a).

Examiner's rejection under 35 U.S.C. 102 or 103, requires a examiner identify a physical embodiment which shows every element of the recited claimed invention or the claimed invention, recited as a whole is obvious. Any rejection under 102 or 103(a) as anticipated by, or made obvious by, Greenfield, a data processing machine with all of the constituent elements, including software, as would be understood by those skilled in the art, is a statement by examiner, the recited elements do exist in a physical machine or process, identified by examiner as the Greenfield device. This examiner statement relying of a previously issued patent, is a contraction of examiner's rejection under 35 U.S.C. 101, that the recited claims fail to recite any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.

Examiner's rejection under 35 U.S.C 101, on one hand and under 35 U.S.C. 101 or 103, on the other hand, contradict and nullify each other. Examiner must make an election of a rejection under 35 U.S.C. 101 or admit there is no ground for the 35 U.S.C 101 rejection, by the assertion of the rejections under 35 U.S.C. 102, 103(a).

Rejection unde 35 U.S.C. 102

Claims 1, 5 and 6.

Greenfield, col. 3 to col. 4, is a general statement limited to what Greenfield intends and does not disclose applicant's invention.

Col.7, refers to Fig. 2 and a suitable data processing system for practicing the Greenfield "invention." Col. 7 refers to Table 1, Step 100 and part of Table 2, Step 200. Table 2, discloses a Condition Survey to establish a baseline and to collect data. Greenfield does not disclose the recitation of Claim1, reciting,

“ means for producing reports includes means for producing summary recommended work reports summarizing recommended work for controlling corrosion at the enterprise, structural, and element, levels.”

Claim 5, recites,

The system of claim 1, wherein said means for producing summary work reports includes means for producing for at least one said summary work report, listing the recommended work in at least one time defined forecast, or a report of the cost of deferring any part of said recommended work.

Claim 6, reciting,

The system of claim 5, wherein said means for producing a report listing said recommended work in at least one time defined forecast, includes means for producing a plurality of said time defined forecast reports for separate respective time periods.

Greenfield, in col. 7, lines 33 – 52, does not disclose time defined forecasts, or timed defined forecast reports for separate respective time periods, at the enterprise, structural, and element levels.

Claims 7 to 14.

Greenfield does not show as recited in claims7, said means for producing summary recommended work reports at said element level includes means for producing at said elemental level, at least a deferred work report, or

as recited in Claim 8,

said means for storing data includes means for storing data indicative of condition evaluation of at least one element, and of respective corrosion control action for a respective element at a defined degradation level; or

as recited in Claim 9,
said means for storing data includes means for storing data indicative of corrosion control standards for costs, actions, or expected service life; or

as recited in Claim 10,
said means for data collection includes means for storing element data indicative of a respective element and of said respective element's total area, or event type, or date or condition grade, or percentage repair area, or coating system, or critical inspection items, or digital photographs; or

s recited in Claim 11,
said means for producing said summary recommended work reports at said element level, include means for using at least some of said element data and at least some of said data indicative of corrosion control standards for producing budget estimates or maintenance actions; or

as recited in Claim 12,
said means for producing summary reports, includes means for producing structure reports by including at least a plurality of elements in said respective structure; or

as recited in Claim 13,
said means for storing data indicative of corrosion control standards, includes means for storing data indicative of an identifier and one or more standards of surface preparation requirements, primer coat, second coat, third coat, finish coat, installed cost, touch-up costs, refresh costs, restore costs, specific use identifier, initial condition factor, or degradation rate factor; or

as recited in Claim 14,

said means for producing summary recommended work reports, includes means for producing an optimum maintenance scheduling report, responsive to at least one selected element, selected acceptable condition grade, condition grade expected in relation to the related installed coating system for the respective element, and providing actions or budget estimates.

Claim 15 recites,

the system of claim 7, wherein said means for producing summary recommended work reports, includes means for producing a material performance report for comparing the performance of an applied corrosion control system with expected performance for said applied system and including means for combining element data for at least one selected element, said element data including actual condition grade data, with data indicative of expected performance for said element with said applied system.

There is no disclosure in Greenfield , col. 12, lines 53 -65 or in col. 2, lines 26 – 30, of an expected performance report, as recited in the claim.

Claim 16, recites,

The system of claim 7, wherein said means for producing summary recommended work reports includes means for producing a cost of deferring work report including data indicative of at least one selected element, a selected deferral period, data indicative of the expected performance of a corrosion control system applied to said selected element, means responsive to said element data and said expected performance data for calculating the future costs of deferred maintenance.

Greenfield, col. 13, line 53 - 65, is limited to its claim 3 and there is no disclosure of a “deferring work report,” or “calculating the future costs of deferred maintenance.”

Claim 17 recites,

the system of claim 7, wherein said means for producing summary recommended work reports includes means for producing a completed work report responsive to element data indicative of the element name, and a completed event type or completed event date or costs of completion.

Claim 18, recites,

The system of claim 17, wherein said means for producing a summary recommended work report includes means for using at least some of said element data and at least some of said data indicative of corrosion control standards for producing budget estimates for a selected element and for comparing said budget estimates with said costs of completion for said selected element.

Greenfield, col. 5, Table 3, is limited to “costs” data and does not disclose “comparing said budget estimates with said costs of completion for said selected element.”

Claim 21, recites,

The system of claim 1, wherein said means for producing said summary recommended work reports includes means for maintenance priority reports including means for using element data for at least one selected element, indicative of priority, refresh or restore costs, and means for determining the priority for maintenance for said selected element based on a designated allocation of maintenance budget.

Greenfield, col.1, lines 53 – 65, does not include in its catalogue of reports, a report including information produced by a means for determining the priority for maintenance for said selected element based on a designated allocation of maintenance budget.

Claims 23 is patentable for the grounds given with respect to claims 1 and 5.

Claim 27 recites²⁷,

The method of claim 23, wherein said step of producing summary work reports includes the step of producing for at least one said summary work report, listing the recommended work in at least one time defined forecast, and a report of the cost of deferring any part of said recommended work.

Examiner has not disclosed any reference in Greenfield to a report of the “cost of deferring any part of said recommended work.”

Claim 29 recites,

The method of claim 23, wherein said step of producing summary recommended work reports at said element level includes the step of producing at said elemental level, at least a coating system performance report, and deferred work report.

Examiner has not disclosed any reference in Greenfield to a deferred work report.

Claim 30 is allowable for the grounds given for Claim 23.

Claim 32 recites,

The method of claim 31, wherein said means for storing data includes the step of storing element data indicative of a respective element and of said respective element's total area, or event type, or date or condition grade, or percentage repair area, or coating system, or critical inspection items, or digital photographs, and said step of producing said summary recommended work reports at said element level, include the step of using at least some of said element data and at least some of said data indicative of corrosion control standards for producing budget estimates and maintenance actions.

Greenfield does not budget estimates and maintenance actions.

Claim 34 recites,

The system of claim 33, wherein said data base is adapted to include data indicative of at least one structure comprising a plurality of elements or an enterprise comprising a plurality of structures and said data processor is adapted to produce at least one summary recommended work report summarizing recommended work for controlling corrosion at the enterprise, structural, and element, level.

Claim 34 is allowable for the reason given for claim 23.

Claims 38 and 39 recite,

Claim 38. The system of claim 33, wherein said data base is adapted to store data indicative of corrosion control standards for surface preparation requirements, primer coat, second coat, third coat, finish coat, installed cost, touch-up costs, refresh costs, restore costs, specific use identifier, initial condition factor, ~~or~~ and degradation rate factor.

Claim 39. The system of claim 38, wherein said data processor responsive to said data indicative of said elements and said corrosion control standards, is

adapted to produce data indicative of at least one optimum maintenance scheduling report including budget estimates or scheduled actions.

The recitation of Claim 38 and of Claim 39 as dependent on Claim 38, are not shown in Greenfield. Greenfield does not show data indicative of “degradation factor.”

Claim 40 recites,

The system of claim 33, wherein said data processor responsive to said data indicative of said elements and said corrosion control standards is adapted to product data indicative of at least one material performance report comparing the performance of an applied corrosion control system with expected performance for said applied corrosion control system.

Greenfield does not disclose in col. 13, lines 53 – 65, and report using any data indicative of expected performance.

Claim 41 recites,

The system of claim 33, wherein said data processor adapted to access said data in said data base to produce data indicative of reports of corrosion control plans for said elements, is adapted to produce data indicative of cost of deferring work including data indicative of at least one selected element, a selected deferral period, data indicative of the expected performance of a corrosion control system applied to said selected element, and responsive to said element data and said expected performance data, data indicative of the future costs of deferred maintenance.

Greenfield does not disclose any data produced indicative of the costs of deferred maintenance, as asserted by examiner, in col. 13.

Claim 42 recites,

The system of claim 33, wherein said data base is adapted to store element data indicative of a respective element and of said respective element's total area, or event type, or date or condition grade, or percentage repair area, or coating system, or critical inspection items, or digital photographs.

Claim 42 is allowable as depending from an allowable claim 33.

Rejection Under 35 U.S.C. 103(a)

Claims 2, 3 and 4, are patentable for the grounds given for claim 1. Greenfield does not disclose the recited invention at the enterprise, structural, and element, levels.

Claim 22 is rejected on official notice that alarms are well known. Valid rejection under 35 U.S.C. 103 requires an explanation of why the “alarm,” as recited in claim 22,

is more than the predictable use of prior-art elements according to their established functions and is no more than a simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.

Greenfield does not show or disclose an “alarm,” or any reason for use of an alarm by itself or in substitution of any other element.

It is the burden of examine to justify the insertion or use of an alarm in applicant's device, by an explanation. “Official Notice,” is not an explanation. Examiner will have to do amplify this ground of rejection.

Claim 24 is allowable for the reason given for claim 23. There is no disclosure or teaching in Greenfield of generating reports at the enterprise, structural or element, level.

For claim 37, there is no disclosure in Greenfield of any report of a cost of deferred work or has examiner provided an explanation why this deferred work report would be obvious.

Claim 45 was not rejected under 35 U.S.C. 102 or 103, with any included grounds for rejection. Applicant replies to this rejection for Claim 44, as oversight and a rejection that would have been, applied to Claim 45, reciting,

The system of claim, 40 wherein said data processor is adapted to generate one or more alarms in response to said material performance report.

For record purposes, for claim 45, Greenfield does not show or disclose an “alarm or any reason for use of an alarm by itself or in substitution of any other element.

It is the burden of examine to justify the insertion or use of an alarm in applicant’s device, by an explanation. “Official Notice,” is not an explanation. Examiner will have to do amplify, or withdraw, this ground of rejection.

Applicant has responded to each ground of rejection and believes all claims are in condition for allowance, as individually meeting the requirements of 35 U.S.C. 101 and distinguishing over Greenfield under 35 U.S.C. 102 and 103(a).

Respectfully,

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